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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,890	05/19/2006	Hiroaki Murase	041230-0310213	6561
909	7590	08/09/2007		
PILLSBURY WINTHROP SHAW PITTMAN, LLP			EXAMINER	
P.O. BOX 10500			GALE, KELLETTE	
MCLEAN, VA 22102				
			ART UNIT	PAPER NUMBER
			1621	
			MAIL DATE	DELIVERY MODE
			08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,890	Applicant(s) MURASE ET AL.	
	Examiner Kellette Gale	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, and 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of claims

Claims 1-3, 5, and 8-20 are pending in this application.

Claims 8-20 have been added.

Claims 1-3, 5, and 8-20 have been rejected.

Response to Amendment

The amendments to the claims have been received and acknowledged by the Examiner.

Response to Arguments

Applicant's arguments, see remarks, filed June 8, 2007, with respect to the rejection(s) of claim(s) 1-7 under 102(b) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made. Please see below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 5, and 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (JP 08217713) in view of Fennhoff (US 5,914,431) and optionally in view of Shinagawa et al (JP 09124530).

Applicant claims a method for producing a fluorene derivative which comprises subjecting fluorenone and a phenolic compound to a condensation reaction in coexistence with a mercaptocarboxylic acid and hydrochloric acid aqueous solution to obtain a fluorene derivative, adding to the resulting condensation reaction mixture to distribute the object compound to the organic layer, a crystallization solvent is added to the organic layer to crystallize the fluorene derivative.

Determination of the scope and content of the prior art

(MPEP §2141.01)

Takahasi et al teach a process wherein florenone is reacted with phenol using $\text{HS}(\text{CH}_2)_2\text{CO}_2\text{H}/\text{HCl}$ as a catalyst. The reaction mixture is then mixed with diisopropylbiphenyl, distilled, and recrystallized from MeCN to give 9,9-bis(4-hydroxyphenyl) fluorene derivatives with 99.3% purity.

Fennhoff teaches a similar process wherein aqueous HCl or hydrogen chloride gas may be used.

Shinagawa et al teaches a similar process as applied above wherein 2-methyl phenol is used in the reaction.

Ascertainment of the difference between the prior art and the claims

(MPEP §2141.02)

Takahasi et al does not teach a process wherein there is an alkyl group on the phenol used in the reaction. Also, process conditions such as temperature and concentration are explicitly taught.

Finding of prima facie obviousness

Rational and Motivation (MPEP §2142-2143)

One having ordinary skill in the art would find it obvious to utilize an alkylated phenol compound in order to prepare a fluorene derivative as set forth in the claims having noted the reaction exemplified in Takahasi et al and Shinagawa et al. One having ordinary skill in the art at the time of the instant invention would be motivated to do so with a reasonable expectation of success as Takahasi et al and Shinagawa et al have done so successfully. Also, merely modifying the process conditions such as temperature and concentration is not a patentable modification absent a showing of criticality. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kellette Gale whose telephone number is (571) 272-8038. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, YVONNE EYLER can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Kellette Gale
Patent Examiner
Technology Center 1600

August 2, 2007

A handwritten signature in black ink, appearing to read 'S. Barts', is written over a horizontal line.

Samuel Barts
Primary Patent Examiner
Technology Center 1600